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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/735,930	12/14/2000	Naomi Noda	WATK:205	5806

7590

01/27/2003

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EXAMINER

NGUYEN, CAM N

ART UNIT

PAPER NUMBER

1754

DATE MAILED: 01/27/2003

8

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.  
**09/735,930**

Applicant(s)  
**Noda et al.**

Examiner  
**Cam Nguyen**

Art Unit  
**1754**



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE three MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on Nov 8, 2002
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some\* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_ 6) ☐ Other:

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### DETAILED ACTION

1. Applicants' remarks and amendments, filed on November 8, 2002, have been carefully considered. Claims 1-6 have been amended.

Claims 1-8 remain pending in this application.

#### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lindner et al., "hereinafter Lindner", (U.S. Pat. 6,348,430 B1) taken together with Deeba et al., "hereinafter Deeba", (US Pat. 6,375,910 B1).

Lindner discloses an exhaust gas catalyst containing two catalytically active layers on a carrier structure: the first layer applied to the carrier structure containing several finely divided solids, one or more highly dispersed alkaline earth metal oxides and at least one platinum group metal, wherein the finely divided solids consists of at least one finely divided oxygen-storing material and at least one other finely component and the platinum group metals are in close

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contact with all of the constituents in the first layer (see col. 4, ln 26-34); the second layer also contains several finely divided solids and at least one platinum group metal, wherein the finely divided solids in this second layer comprise at least one finely divided oxygen-storing material and at least one other finely divided component and only a portion of these finely divided solids in the second layer is used as support for the platinum group metals in the second layer (see col. 4, ln 48-60). The platinum group metals form the catalytically active components in the catalyst including platinum, palladium, rhodium, osmium, and iridium (see col. 4, ln 36-39). The finely divided components may be oxides of alkaline earth metal, oxides of scandium, yttrium, gallium, indium, silicon, titanium, zirconium, hafnium, germanium, tin, lead, vanadium, niobium, tantalum, chromium, molybdenum, and tungsten (see col. 5, ln 1-5). The carrier structure is taught to be a monolithic honeycomb carrier structure which can be made from cordierite (see col. 1, ln 42-50).

Regarding claim 1, Lindner does not disclose alkali metal. However, it would have been *prima facie obvious* to one of ordinary skill in the art at the time the invention was made to have incorporated the alkali metal component into the catalyst of Lindner to obtain an improved catalyst because Deeba fairly teaches a similar exhaust gas catalyst utilizing one or more alkali metals as a NO<sub>x</sub> sorbent (see Deeba at col. 23, ln 28-31). Further, a person having the ordinary skill in the art would be motivated to combine the teaching of the Deeba reference with Lindner in view of the advantage that the alkali metals have long been used in the catalyst to remove or reduce nitrogen oxide (NO).

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Regarding claims 2, the claim is met by the teaching of the reference because Lindner discloses the same components (see Lindner at col. 5, ln 1-5).

Regarding claim 3, the claim is met by the teaching of the reference since Lindner discloses that the catalyst contains platinum group metals (see Lindner at col. 4, ln 36-39).

Regarding claim 4, applicants claiming “the substance is contained in the carrier” is noted. It is considered the claim is met by the teaching of the reference because Lindner teaches that the second layer comprises at least one finely divided oxygen-storing material and at least one other finely divided component and only a portion of these finely divided solids in the second layer is used as support for the platinum group metals in the second layer (see Lindner at col. 4, ln 48-60), wherein the finely divided components disclosed including gallium, silicon, titanium, zirconium, germanium, tin, vanadium, chromium, molybdenum, and tungsten that applicants claiming (see Lindner at col. 5, ln 1-5). Thus, Lindner teaches the finely divided solids (or the claimed substance) contained in the carrier.

Regarding claim 5, applicants claiming “the substance is contained in the catalyst layer” is noted. The claim is met by the teaching of the reference because Lindner teaches both the first catalyst layer and the second catalyst layer contain the finely divided solids (or the claimed substance) (see Lindner at col. 4, ln 26-34 & col. 4, ln 48-60).

Regarding claim 6, applicants claiming “a layer of a the substance is formed between the carrier and the catalyst layer” is also noted. It is considered the claim is met by the teaching of the reference since Lindner teaches a carrier comprising a first catalyst layer and a second catalyst

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layer, wherein both layers contain the finely divided solids (see Lindner at col. 4, ln 26-34 & col. 4, ln 48-60). Since the first catalyst layer contains the finely divided solids (or the claimed substance) is between the carrier structure and the second catalyst layer, it meets the claimed limitation.

Regarding claims 7 & 8, the claims are met by the teaching of the reference since Lindner discloses the same carrier (see Lindner at col. 1, ln 42-50).

***Response to Amendment***

4. Applicants' amendment/response filed on 11/08/02 has been considered, but deemed not persuasive in view of the new ground of rejections above.

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however,

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will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

***Conclusion***

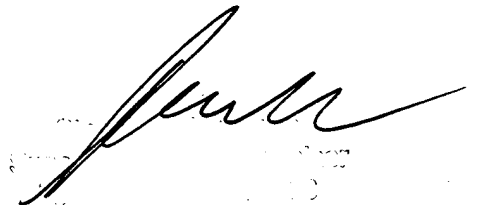
6. Claims 1-8 are pending in the application. Claims 1-8 are rejected. No claims are allowed.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Cam Nguyen, whose telephone number is (703) 305-3923. The examiner can normally be reached on M-F from 8:30 am. to 6:00 pm, with alternative Monday off.

The appropriate fax phone number for the organization where this application or proceeding is assigned is (703) 872-9310 (before finals) and (703) 872-9311 (after-final).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Nguyen/cnn *CNN*  
January 21, 2003

A handwritten signature in black ink, appearing to be 'Cam Nguyen', is written over a faint rectangular stamp.